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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:	:	
Bernard S. Mientus et al.	:	Group No.: 1762
Serial No.: 09/332,273	:	Examiner: E. Tsoy
Filed: June 11, 1999	:	

For: MULTILAYERED THERMOPLASTIC FILM AND SIGN CUTTING METHOD USING THE SAME

Mail Stop Appeal Brief Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL OF APPEAL BRIEF (PATENT APPLICATION - 37 CFR 192)

1. Transmitted herewith in triplicate is the APPEAL BRIEF in this application with respect to the Notice of Appeal filed on November 26, 2003.

2. **STATUS OF APPLICANT**

This application is on behalf of

[X] other than a small entity
[ ] small entity

CERTIFICATE OF MAILING (37 CFR 1.8(a))

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: Mail Stop Appeal Brief Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Claudia Bader
(Type or print name of person mailing paper)

Date: January 26, 2004

Claudia Bader
(Signature of person mailing paper)

3. FEE FOR FILING APPEAL BRIEF

Pursuant to 37 CFR 1.17(f) the fee for filing the Appeal Brief is:

[ ] small entity $165.00

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Appeal Brief fee due $330.00

4. EXTENSION OF TERM

The proceedings herein are for a patent application and the provisions of 37 CFR 1.136 apply.

(a) [ ] Applicant petitions for an extension of time under 37 CFR 1.17(a)-(d) for the total number of months checked below:

	Extension (months)	Fee for other than small entity	Fee for small entity
[ ]	one month	$ 110.00	$ 55.00
[ ]	two months	$ 420.00	$210.00
[ ]	three months	$ 950.00	$475.00
[ ]	four months	$1,480.00	$740.00

Fee $_____

If an additional extension of time is required please consider this a petition therefor.

[ ] An extension for _____ months has already been secured and the fee paid therefor of $_____ is deducted from the total fee due for the total months of extension now requested.

Extension fee due with this request $_____

or

(b) [X] Applicant believes that no extension of term is required. However, this conditional petition is being made to provide for the possibility that Applicant has inadvertently overlooked the need for a petition and fee for extension of time.

5. TOTAL FEE DUE

The total fee due is:

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[X] Attached is a check in the sum of $330.00

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A duplicate of this transmittal is attached.

7. FEE DEFICIENCY

[X] If any additional extension and/or fee is required, this is a request therefor and to charge Account No. 18-0988.

AND/OR

[X] If any additional fee for claims is required, charge Account No. 18-0988.

SIGNATURE OF ATTORNEY

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Date: January 26, 2004

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Bernard S. Mientus et al.	:	Art Unit: 1762
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APPEAL BRIEF

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Dear Sir:

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I. REAL PARTY IN INTEREST.

The real party in interest in this appeal is Avery Dennison Corporation, 150 North Orange Grove Boulevard, Pasadena, California 91103, the assignee of the above-captioned application.

II. RELATED APPEALS AND INTERFERENCES.

Appellants are aware of no related appeals or interferences which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. STATUS OF CLAIMS.

Claims 81-85, 87-89, 91-95, 97-99, 101-104, 107-110, 113 and 115-118 are pending in the application. These claims are reproduced in the attached APPENDIX.

This is an appeal from the final rejection of August 27, 2003 rejecting all of the claims in the above-captioned application.

IV. STATUS OF AMENDMENT.

A response under Rule 116 was filed on October 24, 2003. An Advisory Action was mailed on November 24, 2003 maintaining the final rejection of the claims. The Notice of Appeal was received in the Patent and Trademark Office on December 1, 2003.

V. SUMMARY OF THE INVENTION.

Appellants' invention, in one embodiment, relates to a multilayered thermoplastic film (page 2, line 22) comprising a thermoplastic core layer having a first side and a second side (page 2, line 23); an abrasion and scuff resistant first thermoplastic skin layer overlying the first side of the core layer (page 2, lines 25-27); at least one second thermoplastic skin layer overlying the second side of the core layer (page 2, lines 27-28); and at least one layer of a pressure sensitive adhesive overlying the second thermoplastic skin layer (page 4, lines 3-4); wherein the composition of the core layer is different from the composition of the skin layers and the core layer and the skin layers are characterized by

the absence of PVC (page 2, lines 30-33). In one embodiment, the thermoplastic core layer may comprise

(a) a polyolefin having a density in the range of from about 0.89 to about 0.97 grams per cubic centimeter (page 2, lines 24-25); and

(b) from about 2% to about 25% (page 5, lines 17-18) by weight of a second polymeric material selected from ionomers derived from sodium, lithium or zinc and an ethylene/unsaturated carboxylic acid copolymer (page 5, lines 14-16).

The core layer may also comprise

(c) a light stabilizer at a concentration of from about 1,000 to about 10,000 ppm based on the weight of the core layer (page 3, lines 6-7); and further optionally,

(d) from about 1% to about 40% by weight of a third polymeric material selected from ethylene/vinyl acetate copolymers, acid modified ethylene/vinyl acetate copolymers, anhydride modified ethylene/vinyl acetate copolymers, acrylate modified ethylene/vinyl acetate copolymers, anhydride modified polyolefins, acid modified ethylene acrylate polymers and anhydride modified ethylene acrylate polymers.

In another embodiment (claims 88, 89, 98, 99, 109 and 110), the multilayer thermoplastic films of the invention may also comprise an opacifying layer between the core layer and the second skin layer (page 6, lines 33 to page 7, line 11). In yet another embodiment of the invention (claims 103, 104, 107-110, 113, and 115-118, the multilayer thermoplastic films are unoriented. (Page 4, lines 33-34).

The multilayered thermoplastic films of the present invention are useful for providing signs (page 5, lines 1-3) which can be applied to a variety of substrates and surface contours. These include long-term exterior identification signs as well as decorative or commercial graphics on cars, trucks, boats, and the like (page 55, lines 7-10).

VI. ISSUES ON APPEAL.

The claims on appeal stand rejected under 35 USC §103(a). The issues in this appeal are as follows:

(A) Whether claims 81-85, 87, 91-95, 97, 101-104, 107, 108 and 113 are obvious over Mueller U.S. 4,532,189 in view of EP 569,878, and further in view of Josephy et al U.S. 5,451,283;

(B) Whether claims 88, 89, 98, 99, 109 and 110 are obvious over Mueller '189 in view of EP 878 and Josephy et al '283 and further in view of Schreck et al U.S. 5,716,698;

(C) Whether claims 115-118 are obvious over Mueller '189 in view of Josephy et al '283.

VII. GROUPING OF THE CLAIMS.

For the purpose of this appeal, the claims fall into three groups:

Group 1: Claims 81-85, 87, 91-95, 97 and 101-104, 107, 108 and 113.

Group 2: Claims 88, 89, 98, 99, 109 and 110.

Group 3: Claims 103, 104, 107-110, 113 and 115-118.

The patentability of each group should be considered separately.

VIII. APPELLANTS' ARGUMENTS.

(A) Claims 81-85, 87, 91-95, 97, 101-104, 107, 108 and 113 are not obvious, under 35 USC §103(a), over Mueller '189 in view of EP '878 and further in view of Josephy et al '283.

Claims 81-85, 87, 91-95, 97, 101-104, 107, 108 and 113 have been rejected as being obvious over the combination of Mueller '189, EP '878 and Josephy et al '283. The Examiner has asserted that Mueller '189 discloses a multilayer thermoplastic film comprising a thermoplastic core layer having a first side and a second side, the core layer comprising: (a) 10-80% linear low density polyethylene having a density of from 0.910 to 0.925 g/cc, or 10-80% linear medium density polyethylene having a density of from 0.926 to 0.940; (b) 10-80% ionomer resin such as Surlyn 1601; and (c) 10-80% ethylene vinyl acetate; first and second thermoplastic skin layers comprising ethylene propylene copolymers blended with linear low density polyethylene or linear medium density polyethylene overlying the first side and second side of the core layer whereby the

composition of the core layer is different from the composition of the skin layers, and the core layer and the skin layers are characterized by the absence of PVC. The multilayer film is a coextrudate (unoriented) which is then oriented.

As to claims 85, 91, 95, 101, 104 and 108, the Examiner asserts that Mueller discloses a 5-layer thermoplastic film comprising a core layer 2 (column 6, lines 11-16); intermediate layers 5 and 7 comprising LLDPE or LMDPE and an ionomer (column 6, lines 24-35) and skin layers 4 and 8 comprising formulations of the skin layers 1 and 3. The Examiner further asserts that the topcoat layers 4 and 8 are clear since they are made from inherently clear formulations.

The Examiner has acknowledged on page 5 of the Communication mailed on July 11, 2003, that Mueller fails to teach

(1) The core layer comprises a light stabilizer at a concentration of about 1,000 to 10,000 ppm based on the weight of the core layer (independent claims 81, 93 and 103, and the claims dependent therefrom); and

(2) The first skin layer comprises a light stabilizer at a concentration of about 2,000 to about 20,000 ppm based on the weight of the skin layer, and the second skin layer comprises a light stabilizer at a concentration of 1,000 to 15,000 ppm based on the weight of the second skin layer (independent claim 103 and claims dependent therefrom);

To overcome these deficiencies, the Examiner relies on EP 569,878. The Examiner has asserted that EP 569,878 teaches a multilayer thermoplastic laminate consisting of a core layer containing not more than 0.5 weight percent of a UV absorber (stabilizer) with outer layer(s) containing at least 1% UV absorber on at least one side. The laminates described in EP '878 are useful for glazing and construction applications especially externally where the outer layer is exposed to sunlight. Accordingly, the Examiner concludes it would have been obvious to one or ordinary skill in the art at the time the invention was made to have included ultraviolet stabilizers into the core layer (e.g., in an amount of not more than 0.5 weight percent) and skin layers (e.g., in an amount of at least 1%) in a thermoplastic film of Mueller for use in applications where the outer layer is exposed to sunlight with the expectation of providing the desired protection against ultraviolet light, since EP '878 teaches that a multilayer thermoplastic laminate containing

a UV stabilizer in each layer can be used for glazing and construction applications, especially externally where the outer layer is exposed to sunlight.

The Examiner also has acknowledged on page 5 of the Communication mailed July 11, 2003 that the combination of Mueller/EP '878 fails to teach

(3) A layer of pressure sensitive adhesive overlying the second thermoplastic skin layer (all claims under appeal), and

(4) A release liner overlying the layer of pressure sensitive adhesive (claims 97, 116 and 118).

To overcome these deficiencies the Examiner relies on Josephy et al and asserts that Josephy et al teach that a multilayer thermoplastic film may be combined with a pressure sensitive adhesive and a release liner overlying the layer of pressure sensitive adhesive for making a multilayer film labelstock (see Fig. 2; column 5, lines 15-19 and column 6, lines 19-27). Inorganic fillers such as titanium dioxide may be used to provide opaque film labelstock (column 6, lines 49-51). Josephy et al also suggests that polyolefin blend films are resistant to abrasion when extruded, but such resistance is degraded when the film is uniaxially oriented following extrusion, and extruded non-stretched films achieve high abrasion resistant ratings although their MD stiffness is too low for proper dispensing (column 10, lines 43-59).

Moreover, according to the Examiner, it would have been obvious to have combined an extruded multilayer thermoplastic film obtained by the combination of Mueller and EP '878, either oriented or unoriented, if high abrasion resistance is required, with a pressure sensitive adhesive and a release liner overlying the layer of pressure sensitive adhesive for making multilayer film facestock as taught by Josephy et al.

Appellants respectfully submit that the above rejection should be reversed because there if no teaching or suggestion in either of the two secondary references relied upon by the Examiner which would motivate one skilled in the art to modify Mueller '532 in the manners suggested by the Examiner.

The above rejected claims are directed to a multilayer thermoplastic film which comprises a core layer; at least one abrasion resistant first thermoplastic skin layer overlying the first side of the core layer; at least one second thermoplastic skin layer

overlying the second side of the core layer; and at least one layer of a pressure sensitive adhesive overlying the second thermoplastic skin layer. All of the rejected claims require the presence of a light stabilizer in the core layer, and claims 103, 104, 107 and 108 further require the presence of a light stabilizer in both of the skin layers. In claims 103, 104, 107, 108 and 113, the multilayer film is defined as being "unoriented".

The rejection should be reversed because the Examiner has acknowledged that Mueller fails to teach (1) the core layer may comprise a light stabilizer at a concentration of about 1,000 to about 10,000 ppm based on the weight of the core layer; (2) the first skin layer comprises a light stabilizer at a concentration of 2,000 to about 20,000 ppm based on the weight of the first skin layer; and (3) the second skin layer comprises a light stabilizer at a concentration of about 1,000 to about 15,000 ppm based on the weight of the second skin layer; and (4) a pressure sensitive adhesive layer overlying a skin layer (Communication of July 11, 2003, page 5). Moreover, with respect to claims 87 and 97, the Examiner has acknowledged that Mueller and EP '878 does not teach or suggest the presence of a release liner overlying a layer of pressure sensitive adhesive. (Communication of July 11, 2003, page 5).

EP 569,878 is relied upon by the Examiner for its teaching that a multilayer thermoplastic laminate consisting of a core layer containing not more than 0.5 weight percent UV absorber (stabilizer), with outer layers containing at least 1% UV absorber on at least one side can be used for glazing and construction applications, especially where the outer layer is exposed to sunlight. Based upon these teachings in EP '878 the Examiner has concluded that it would be been obvious to have included ultraviolet light stabilizes into the core layer and into the skin layers of Mueller.

Even if, for sake of argument, it would have been obvious to include light stabilizers in the core layer and the skin layers of Mueller's multilayer films based upon the teachings of EP '878, there is no teaching or suggestion to add a layer of pressure sensitive adhesive over one of the skin layers in either of the cited references. To overcome this deficiency, the Examiner relies upon Josephy et al U.S. Patent 5,451,283 which relates to a multilayer thermoplastic film which may be combined with a pressure sensitive adhesive and a release liner.

The Examiner has suggested that since Mueller teaches "the multilayer film may be combined with other polymeric materials for specific applications" (column 4, lines 35-40), it would be obvious to add a pressure sensitive adhesive layer to the films of Mueller in view of Josephy et al.

Appellants respectfully submit that the rejection should be reversed. Mueller's general teaching that his thermoplastic film "may be combined with other polymeric materials for specific applications" is so broad and general that it fails to provide a basis for the specific modification suggested by the Examiner. There is no teaching or suggestion in Mueller to include a layer of a pressure sensitive adhesive in his multilayer films, and there is no teaching in Mueller that would suggest the desirability of such a modification. The Federal Circuit has repeatedly warned that the requisite motivation to modify a reference must come from the prior art, not from what is taught by an Applicant for a patent. Mueller contains no suggestion of using a pressure sensitive adhesive layer, and as noted in In re Gordon, 733 F2d, 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984), the mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art would suggest the desirability of the modification.

The only description of "other polymeric materials for specific applications" suggested by Mueller is that relatively thin layers may be added on either or both sides of the basic preferred three layer structure to improve seal strength or to lower gas and moisture permeability. No examples of polymeric compositions are given. Mueller's general teaching would include hundreds or even thousands of possible polymeric materials for various unspecified applications, and there is no teaching in Mueller that would lead one skilled in the art, or the Examiner, to a reference such as Josephy et al unless a person skilled in the art, or the Examiner first read Appellants' patent application.

In addition, the Examiner's attempt to extend the meaning of the phrase "may be combined with other polymeric materials for specific applications" found in Mueller to include a layer of a pressure sensitive adhesive and to include any application such as label or sign is unwarranted and unsupported. In fact, Mueller et al issue their own caution in column 7, lines 12-18:

> Additional layers and/or minor amounts of additives of the types described above may be added to either the three-layer or five-layer structure of the present invention as desired but care must be taken not to adversely alter the desirable shrink tensions, shrink properties, optics and other characteristics of the multilayer film of the present invention. (Emphasis added).

In view of these cautions listed by Mueller, it is respectfully submitted that Mueller's "specific applications" relate to applications as shrinkable films only, and it would not be obvious to one skilled in the art to add a pressure sensitive adhesive layer to the multilayer films described by Mueller for the purpose of preparing films for signs and labels. The addition of a layer of pressure sensitive adhesive to the shrink films described by Mueller would, contrary to his admonition, "adversely alter the desirable shrink tensions, shrink properties, optics and other characteristics of the multi-layer film of the present invention".

Moreover, Appellants submit that it would not be obvious to combine the teachings of Mueller and Josephy since the two patents are directed to different technology. Mueller is concerned with polyethylene shrink films (see title and column 1, lines 7-10) for use in packaging films (column 1, line 9). Josephy '283 is concerned with oriented and annealed films which are not shrink films and are useful in label manufacture. Accordingly, Appellants respectfully submit that claims 81-85, 87, 91-95, 97, 101-104, 107, 108 and 113 are patentable over the combination of Mueller '189, EP '878 and Josephy '189.

Furthermore, as noted above, claims 103, 104, 107, 108 and 113 define the film as being "unoriented". (Part of the Group 3 claims). This feature is an additional distinction over Mueller (and Josephy et al) which further renders these claims unobvious and therefore patentable over the references cited by the Examiner. As noted previously, Mueller et al relates to shrinkable films, and in order to obtain shrinkable films, Mueller's films are stretched to biaxially orient the films. (See, for example column 7, lines 23-24, column 8, lines 21-23 and 29-35; and Examples I-III in columns 8-10). The films prepared in Examples I-III are indicated in Table I (column 11) as having a free shrink in the machine direction and the cross direction.

There is no teaching or suggestion in Mueller that would motivate one skilled in the art to substitute an unoriented film for the oriented heat shrinkable film described by

Mueller. In the Communication of July 11, 2003 (page 3) the Examiner states, with regard to Mueller, "the multilayer film is coextrudate **(unoriented)**, which is then oriented (see column 7, lines 23-24)." (Emphasis in original). Although it is known that a coextrudate initially is "unoriented", Mueller's unoriented coextrudate is not prepared as a final product but as an intermediate which is not isolated or analyzed. The only utility suggested for the coextrudate by Mueller is in the preparation of a oriented and shrinkable film. Thus, when Mueller states that "the multi-layer film may be combined with other polymeric materials for specific applications," Mueller is referring to the multilayer shrinkable film not the coextrudate. Accordingly, for this reason and the reasons described above, it would not be obvious to one of ordinary skill in the art to isolate the unoriented coextrudate intermediate of Mueller and add a layer of pressure sensitive adhesive and, optionally, a release liner. Accordingly, claims 103, 104, 107 and 108 (and other claims directed to unoriented films as described below) are further distinguishable over the references cited by the Examiner, and the rejection of these claims should be reversed.

In the Advisory Action mailed from the Patent Office on November 24, 2003, in response to the reply under Rule 1.116 filed by Appellants on October 24, 2003, the Examiner noted that Appellants' attorney had argued that whereas Mueller's films are shrinkable films, the films described by Josephy are "not shrinkable". For the purposes of that argument, Appellants' attorney meant to say and should have said "are not shrink films" as presently stated above.

In the Advisory Action, the Examiner has stated that "one of ordinary skill in the art would know that oriented and annealed films are still shrinkable as evidenced by Rackovan U.S. Patent 5,435,963, (see column 26, lines 10-15 which is part of claim 48). Although an in-mold label as described in Rackovan's claim 48 which is hot stretched and annealed may have some residual heat shrinkability, such label film is not a "shrink film", as the term is used in the art.

Moreover, the phrase identified by the Examiner in column 26 of Rackovan must be taken in the context of the written description of the '963 patent. The phrase found in column 26 is repeated in column 9, lines 58-64 where the patentees have stated

> The result is that the construction is well balanced with respect to heat-shrinkability at both sides of the construction. Such balancing of the heat-shrinkability is an important concept of the invention.

Balanced constructions in multilayer films are known to those skilled in the art to provide multilayer films which are characterized as having little or no heat-shrinkability except for the inate heat-shrinkability of the material itself. Thus, Appellants submit that the phrase cited by the Examiner in column 26 and also found in column 9 is not a teaching that "oriented and annealed films" are still heat shrinkable to the extent that the films constitute "shrink films" as alledged by the Examiner. In fact, upon reviewing the entire written description of the Rackovan '963 patent, it is clear that Rackovan teaches that annealing at an elevated temperature is conducted to prevent or avoid shrinking. For example, in column 4, lines 58-66, Rackovan states

> The in-mold label film material should be annealed at a temperature sufficiently above the expected surface temperature to avoid shrinking, relaxation or any distortion of the film which may interfere with the in-mold labeling process. The annealing temperature of the film material is therefore equal to or higher than the temperature at which the heat-activated adhesive is eventually to be activated by contact with the workpieces. (Emphasis added).

In addition, in column 5, lines 66 through column 6, line 8, Rackovan states

> In the particular example described, the stock now continues on its way at a rate of 75 feet per minute. As it leaves the pull-roll pair 31, 32, the stretched stock is subject to severe shrinkage if it is heated while under little or no mechanical constraint. The plastic stock is said to have a "memory" of its original length to which it tends to return when heated. The stock is cured or annealed to remove this tendency by applying heat to the tensioned stock at the annealing roll 36 which in the particular example described is maintained at 240°F. (Emphasis added).

In column 11, lines 59-62 Rackovan states

> As indicated above, the annealing temperature of the in-mold label film should exceed the surface temperature in the mold in order to avoid label shrinkage or distortion. (Emphasis added).

Thus, the Examiner's suggestion that Rackovan teaches that an oriented and annealed film is a shrink film is without foundation.

Additionally, the Examiner had suggested in the Advisory Action (page 2) that

> One of ordinary skill in the art would know that shrinkable films that are useful in packaging, and shrinkable labels are directed to the same technology. (Emphasis in original).

The Examiner cites Fujio U.S. 5,421,932 (column 1, lines 21-24); Hostetter U.S. 5,460,878, (column 2, lines 44-45); JP 05208447 (see title); and JP 05305667 (see abstract).

Based upon the above cited documents, it would appear that the Examiner is correct in the statement that "shrinkable films" useful in packaging, and "shrinkable labels" are directed to the same technology. However, the "shrinkable labels" discussed in the cited references are based upon "shrinkable films". Thus, although it might be obvious to combine the teachings of the primary Mueller reference with the four shrinkable film references cited by the Examiner since the secondary references relate to shrinkable films, it would not be obvious to combine the shrinkable film teaching of Mueller with the uniaxially oriented films described by Josephy et al since Josephy et al anneal the films after the films are hot stretched. Thus, Josephy's films are not "shrink films".

(B) Claims 88, 89, 98, 99, 109 and 110 are not obvious, under 35 USC §103(a), over Mueller '189 in view of EP '898 and Joseph et al '283 and further in view of Schreck et al U.S. 5,716,698.

Claims 88, 89, 98, 99, 109 and 110 are dependent claims which specify that an additional opacifying layer is present between the core layer and the second skin layer. Claims 109 and 110 further specify that the multilayer films are unoriented.

Josephy is applied for the same reasons as given above and further for the teaching that labels can be made either clear or opaque depending on the intended use of the final product. Inorganic fillers such as calcium carbonate and titanium dioxide and blends thereof can be used to provide opaque film labelstock (column 6, lines 49-51). The Examiner has noted that a preferred skin layer is an EVA-olefin blend for both contact-clear and opaque label film applications (column 7, lines 9-16).

Accordingly, the Examiner has concluded that it would have been obvious to one of ordinary skill in the art at the time of the invention to have made the film of Mueller in view of EP 569,878 either opaque by adding inorganic fillers such as calcium carbonate to an EVA-olefin blend core layer or clear depending on intended use of a final product as taught by Josephy et al. (Communication of August 27, 2003, page 3). However, the Examiner does acknowledge that Mueller in view of EP and Josephy fail to teach that the film may be rendered opaque by adding an opacifying layer between the core layer and the second skin layer. To overcome this additional deficiency, Schreck et al is relied upon for its teaching that thermoplastic polyolefin films can be made opaque (column 1, lines 6-13); (column 2, line 48) by adding conventional opacifying pigments such as white pigments to at least one of layers of the film (column 3, lines 44-49, 64; column 4, lines 1-4). The Examiner further notes that the secondary reference of Schreck et al is relied upon to show that pigments can be added to any layer in thermoplastic polyolefin films to render the films opaque. Thus, the Examiner concludes it would be obvious to have added white pigments to at least one of the layers in the film of Mueller in view of EP '878 and Josephy et al as taught by Schreck et al.

Appellants respectfully submit that the rejection of these claims also should be reversed since, although it is known to use pigments to render films or layers of multilayer films opaque, there is no teaching or suggestion in the four references relied upon by the Examiner to introduce an opacifying layer between the core layer and the second skin layer as specified in the present claims. Moreover, with respect to claims 104 and 108 which define the multilayer film as being "unoriented", the rejection should be reversed because there is no teaching or suggestion in Mueller (or Josephy) of a multilayer unoriented film containing an adhesive layer.

(C) Claims 115-118 are not obvious, under 35 USC §103(a), over Mueller '189 in view of Josephy '283.

Claims 115 and 116 define an unoriented multilayer thermoplastic film comprising a core layer having a first side and a second side; at least one abrasion resistant first thermoplastic skin layer overlying the first side of the core layer; at least one second thermoplastic skin layer overlying the second side of the core layer; and at least one layer of pressure sensitive adhesive overlying the second thermoplastic skin layer. The core layer comprises (a) a polyolefin having a density in the range of about 0.89 to about 0.97 g/cc; and (b) from about 2% to about 25% of a second polymeric material selected from ionomers derived from sodium, lithium or zinc and an ethylene/unsaturated carboxylic acid copolymer. Claims 117 and 118 are similar to claim 115 except that the core also comprises from about 0.1% to about 40% by weight of a third polymeric material selected from ethylene/vinyl acetate copolymers, acid modified ethylene/vinyl acetate copolymers, anhydride modified ethylene/vinyl acetate copolymers, acrylate modified ethylene/vinyl acetate copolymers, anhydride modified polyolefins, acid modified ethylene acrylate polymers and anhydride modified ethylene acrylate polymers. Unlike the remaining claims under appeal, the multilayer thermoplastic films of claims 115-118 do not specify the presence of a light stabilizer in the core layer.

The Examiner has suggested that Mueller teaches that the heat-shrinkable thermoplastic film may be combined with other polymeric materials for specific applications (column 4, lines 35-40), but the Examiner acknowledges that Mueller et al fail to teach that for some applications a layer of pressure sensitive adhesive overlies the second thermoplastic skin layer and a release liner overlies the skin layer. The Examiner applies Josephy et al for the same reasons as given above, and the Examiner concludes that it would have been obvious to have combine an extruded multilayer thermoplastic film of Mueller, either oriented or unoriented, if high abrasion resistance is required, with a pressure sensitive adhesive and a release liner overlying the layer of pressure sensitive adhesive for making a multilayer film labelstock as taught by Josephy et al.

Appellants request that the rejection of claims 115-118 be reversed since these claims relate to unoriented films containing a layer of pressure sensitive adhesive, and

such claims would not be obvious over the combination of Mueller and Josephy. As noted by the Examiner, Mueller teaches that the heat-shrinkable thermoplastic film may be combined with other polymeric materials for specific applications. In order to be heat-shrinkable, the film must be oriented. Although Mueller mentions a coextrudate (unoriented) as an intermediate, there is no teaching or suggestion by Mueller that such an intermediate could be combined with any other polymeric materials for specific applications. Although Appellants submit that it would not be obvious to combine the teachings of Mueller and Josephy for the reasons given above. However, even if, for the sake of argument, it would be considered obvious to combine the teachings of Mueller and Josephy, one skilled in the art would add a layer of pressure sensitive adhesive to Mueller's oriented heat-shrinkable film, not the intermediate coextrudate which is unoriented. Accordingly, the rejection of claims 115-118 should be reversed.

IX. CONCLUSION.

For the foregoing reasons, Appellants respectfully submit that the rejected claims are not obvious over the references relied upon by the Examiner. All of the claims pending in the application are patentable over the references relied upon by the Examiner, and the rejection of all of the claims should be reversed.

Respectfully submitted,

RENNER, OTTO, BOISSELLE & SKLAR, LLP

By _____
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APPENDIX: CLAIMS ON APPEAL

81. A multilayered thermoplastic film, comprising:

a thermoplastic core layer having a first side and a second side, the core layer comprising:

(a) a polyolefin having a density in the range of about 0.89 to about 0.97 grams per cubic centimeter;

(b) from about 2% to about 25% by weight of a second polymeric material selected from ionomers derived from sodium, lithium or zinc and an ethylene/unsaturated carboxylic acid copolymer; and

(c) a light stabilizer at a concentration of about 1000 to about 10,000 ppm based on the weight of the core layer;

at least one abrasion resistant first thermoplastic skin layer overlying the first side of the core layer;

at least one second thermoplastic skin layer overlying the second side of the core layer, and

at least one layer of a pressure sensitive adhesive overlying the second thermoplastic skin layer,

wherein the composition of the core layer is different from the composition of the skin layers, and the core layer and the skin layers are characterized by the absence of PVC.

82. The film of claim 81, wherein the core comprises from about 2% to about 10% by weight of the second polymeric material.

83. The film of claim 81, wherein the core layer further comprises:

(c) from about 1% to about 45% by weight of a third polymeric material selected from ethylene/vinyl acetate copolymers, acid modified ethylene/vinyl acetate copolymers, anhydride modified ethylene/vinyl acetate copolymers, acrylate modified ethylene/vinyl acetate copolymers, anhydride modified polyolefins, acid modified ethylene acrylate polymers and anhydride modified ethylene acrylate polymers.

84. The film of claim 83, wherein the core comprises from about 20% to about 40% by weight of the third polymeric material.

85. The film of claim 81, further comprising a clear topcoat layer which overlies the first thermoplastic skin layer, wherein the clear topcoat layer is characterized by the absence of PVC.

87. The film of claim 81, wherein a release liner overlies the layer of pressure sensitive adhesive.

88. The film of claim 81, further comprising an opacifying layer between the core layer and the second skin layer.

89. The film of claim 88, wherein the opacifying layer comprises a white pigment, a black pigment or a mixture thereof.

91. The film of claim 81, wherein the first skin layer is comprised of an ionomer derived from sodium, lithium or zinc and an ethylene/unsaturated carboxylic acid copolymer.

92. The film of claim 83, wherein the third polymeric material is an ethylene/vinyl acetate copolymer.

93. A multilayered thermoplastic film, comprising:

a thermoplastic core layer having a first side and a second side, the core layer comprising:

(a) a polyolefin having a density in the range of about 0.89 to about 0.97 grams per cubic centimeter;

(b) from about 2% to about 10% by weight of a second polymeric material selected from ionomers derived from sodium, lithium or zinc and an ethylene/unsaturated carboxylic acid copolymer,

(c) from about 1% to about 40% by weight of a third polymeric material selected from ethylene/vinyl acetate copolymers, acid modified ethylene/vinyl acetate copolymers, anhydride modified ethylene/vinyl acetate copolymers, acrylate modified ethylene/vinyl acetate copolymers, anhydride modified polyolefins, acid modified ethylene acrylate polymers and anhydride modified ethylene acrylate polymers; and

(d) a light stabilizer at a concentration of about 1000 to about 10,000 ppm based on the weight of the core layer;

at least one abrasion resistant first thermoplastic skin layer overlying the first side of the core layer;

at least one second thermoplastic skin layer overlying the second side of the core layer, and

at least one layer of pressure sensitive adhesive overlying the second thermoplastic skin layer,

wherein the composition of the core layer is different from the composition of the skin layers, and the core layer and the skin layers are characterized by the absence of PVC.

94. The film of claim 93, wherein the core comprises from about 20% to about 40% by weight of the third polymeric material.

95. The film of claim 93, further comprising a clear topcoat layer which overlies the first thermoplastic skin layer, wherein the clear topcoat layer is characterized by the absence of PVC.

97. The film of claim 93, wherein a release liner overlies the layer of pressure sensitive adhesive.

98. The film of claim 93, further comprising an opacifying layer between the core layer and the second skin layer.

99. The film of claim 98, wherein the opacifying layer comprises a white pigment, a black pigment or a mixture thereof.

101. The film of claim 93, wherein the first skin layer is comprised of an ionomer derived from sodium, lithium or zinc and an ethylene/unsaturated carboxylic acid copolymer.

102. The film of claim 93, wherein the third polymeric material is an ethylene/vinyl acetate copolymer.

103. An unoriented multilayered thermoplastic film, comprising:

a thermoplastic core layer having a first side and a second side, the core layer comprising:

(a) a polyolefin having a density in the range of about 0.89 to about 0.97 grams per cubic centimeter;

(b) from about 3% to about 10% by weight of a second polymeric material selected from ionomers derived from sodium, lithium or zinc and an ethylene/methacrylic acid copolymer,

(c) from about 1% to about 40% by weight of a third polymeric material selected from ionomers derived from sodium, lithium or zinc and an ethylene/unsaturated carboxylic acid copolymer,

(d) a light stabilizer at a concentration of about 1,000 to about 10,000 ppm based on the weight of the of core layer;

an abrasion and scuff resistant clear first thermoplastic skin layer overlying the first side of the core layer, the first skin layer comprising a light stabilizer at a concentration of about 2,000 to about 20,000 ppm based on the weight of the first skin layer;

a clear second thermoplastic skin layer overlying the second side of the core layer; the second skin layer comprising a light stabilizer at a concentration of about 1,000 to about 15,000 ppm based on the weight of the second skin layer; and

at least one layer of pressure sensitive adhesive overlying the second thermoplastic skin layer;

wherein the composition of the core layer is different from the composition of the skin layers, and the core layer and the skin layers are characterized by the absence of PVC.

104. The film of claim 103, wherein a clear topcoat layer overlies the first thermoplastic skin layer, the clear topcoat layer being characterized by the absence of PVC.

107. The film of claim 103, wherein the core layer and the skin layers comprise a coextrudate.

108. The film of claim 103, wherein the first skin layer is comprised of an ionomer derived from sodium, lithium or zinc and an ethylene/methacrylic acid copolymer.

109. The film of claim 103, further comprising an opacifying layer between the core layer and the second skin layer.

110. The film of claim 109, wherein the opacifying layer comprises a white pigment, a black pigment or a mixture thereof.

113. The multilayer film of claim 81 wherein the multilayer film is unoriented.

115. An unoriented multilayered thermoplastic film, comprising:

a thermoplastic core layer having a first side and a second side, the core layer comprising:

(a) a polyolefin having a density in the range of about 0.89 to about 0.97 grams per cubic centimeter; and

(b) from about 2% to about 25% by weight of a second polymeric material selected from ionomers derived from sodium, lithium or zinc and an ethylene/unsaturated carboxylic acid copolymer;

at least one abrasion resistant first thermoplastic skin layer overlying the first side of the core layer;

at least one second thermoplastic skin layer overlying the second side of the core layer; and

at least one layer of a pressure sensitive adhesive overlying the second thermoplastic skin layer,

wherein the composition of the core layer is different from the composition of the skin layers, and the core layer and the skin layers are characterized by the absence of PVC.

116. The film of claim 115, wherein a release liner overlies the layer of pressure sensitive adhesive.

117. An unoriented multilayered thermoplastic film, comprising:

a thermoplastic core layer having a first side and a second side, the core layer comprising:

(a) a polyolefin having a density in the range of about 0.89 to about 0.97 grams per cubic centimeter;

(b) from about 2% to about 10% by weight of a second polymeric material selected from ionomers derived from sodium, lithium or zinc and an ethylene/unsaturated carboxylic acid copolymer, and

(c) from about 1% to about 40% by weight of a third polymeric material selected from ethylene/vinyl acetate copolymers, acid modified ethylene/vinyl acetate copolymers, anhydride modified ethylene/vinyl acetate copolymers, acrylate

modified ethylene/vinyl acetate copolymers, anhydride modified polyolefins, acid modified ethylene acrylate polymers and anhydride modified ethylene acrylate polymers;

at least one abrasion resistant first thermoplastic skin layer overlying the first side of the core layer;

at least one second thermoplastic skin layer overlying the second side of the core layer; and

at least one layer of pressure sensitive adhesive overlying the second skin layer;

wherein the composition of the core layer is different from the composition of the skin layers, and the core layer and the skin layers are characterized by the absence of PVC.

118. The film of claim 117, wherein a release liner overlies the layer of pressure sensitive adhesive.

CERTIFICATE OF MAILING (37 CFR 1.8a)

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I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Claudia Bader
(Type or print name of person mailing paper)

Date: January 26, 2004

Claudia Bader
(Signature of person mailing paper)

AVERP2168USA

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of	:	
Bernard S. Mientus et al.	:	Art Unit: 1762
Serial No: 09/332,273	:	Examiner: E. Tsoy
Filed: June 11, 1999	:	

For: MULTILAYERED THERMOPLASTIC FILM AND SIGN CUTTING METHOD USING THE SAME

APPEAL BRIEF

Mail Stop Appeal Brief Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Table of Contents

I. REAL PARTY IN INTEREST.

The real party in interest in this appeal is Avery Dennison Corporation, 150 North Orange Grove Boulevard, Pasadena, California 91103, the assignee of the above-captioned application.

II. RELATED APPEALS AND INTERFERENCES.

Appellants are aware of no related appeals or interferences which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. STATUS OF CLAIMS.

Claims 81-85, 87-89, 91-95, 97-99, 101-104, 107-110, 113 and 115-118 are pending in the application. These claims are reproduced in the attached APPENDIX.

This is an appeal from the final rejection of August 27, 2003 rejecting all of the claims in the above-captioned application.

IV. STATUS OF AMENDMENT.

A response under Rule 116 was filed on October 24, 2003. An Advisory Action was mailed on November 24, 2003 maintaining the final rejection of the claims. The Notice of Appeal was received in the Patent and Trademark Office on December 1, 2003.

V. SUMMARY OF THE INVENTION.

Appellants' invention, in one embodiment, relates to a multilayered thermoplastic film (page 2, line 22) comprising a thermoplastic core layer having a first side and a second side (page 2, line 23); an abrasion and scuff resistant first thermoplastic skin layer overlying the first side of the core layer (page 2, lines 25-27); at least one second thermoplastic skin layer overlying the second side of the core layer (page 2, lines 27-28); and at least one layer of a pressure sensitive adhesive overlying the second thermoplastic skin layer (page 4, lines 3-4); wherein the composition of the core layer is different from the composition of the skin layers and the core layer and the skin layers are characterized by

the absence of PVC (page 2, lines 30-33). In one embodiment, the thermoplastic core layer may comprise

(a) a polyolefin having a density in the range of from about 0.89 to about 0.97 grams per cubic centimeter (page 2, lines 24-25); and

(b) from about 2% to about 25% (page 5, lines 17-18) by weight of a second polymeric material selected from ionomers derived from sodium, lithium or zinc and an ethylene/unsaturated carboxylic acid copolymer (page 5, lines 14-16).

The core layer may also comprise

(c) a light stabilizer at a concentration of from about 1,000 to about 10,000 ppm based on the weight of the core layer (page 3, lines 6-7); and further optionally,

(d) from about 1% to about 40% by weight of a third polymeric material selected from ethylene/vinyl acetate copolymers, acid modified ethylene/vinyl acetate copolymers, anhydride modified ethylene/vinyl acetate copolymers, acrylate modified ethylene/vinyl acetate copolymers, anhydride modified polyolefins, acid modified ethylene acrylate polymers and anhydride modified ethylene acrylate polymers.

In another embodiment (claims 88, 89, 98, 99, 109 and 110), the multilayer thermoplastic films of the invention may also comprise an opacifying layer between the core layer and the second skin layer (page 6, lines 33 to page 7, line 11). In yet another embodiment of the invention (claims 103, 104, 107-110, 113, and 115-118, the multilayer thermoplastic films are unoriented. (Page 4, lines 33-34).

The multilayered thermoplastic films of the present invention are useful for providing signs (page 5, lines 1-3) which can be applied to a variety of substrates and surface contours. These include long-term exterior identification signs as well as decorative or commercial graphics on cars, trucks, boats, and the like (page 55, lines 7-10).

VI. ISSUES ON APPEAL.

The claims on appeal stand rejected under 35 USC §103(a). The issues in this appeal are as follows:

(A) Whether claims 81-85, 87, 91-95, 97, 101-104, 107, 108 and 113 are obvious over Mueller U.S. 4,532,189 in view of EP 569,878, and further in view of Josephy et al U.S. 5,451,283;

(B) Whether claims 88, 89, 98, 99, 109 and 110 are obvious over Mueller '189 in view of EP 878 and Josephy et al '283 and further in view of Schreck et al U.S. 5,716,698;

(C) Whether claims 115-118 are obvious over Mueller '189 in view of Josephy et al '283.

VII. GROUPING OF THE CLAIMS.

For the purpose of this appeal, the claims fall into three groups:

Group 1: Claims 81-85, 87, 91-95, 97 and 101-104, 107, 108 and 113.

Group 2: Claims 88, 89, 98, 99, 109 and 110.

Group 3: Claims 103, 104, 107-110, 113 and 115-118.

The patentability of each group should be considered separately.

VIII. APPELLANTS' ARGUMENTS.

(A) Claims 81-85, 87, 91-95, 97, 101-104, 107, 108 and 113 are not obvious, under 35 USC §103(a), over Mueller '189 in view of EP '878 and further in view of Josephy et al '283.

Claims 81-85, 87, 91-95, 97, 101-104, 107, 108 and 113 have been rejected as being obvious over the combination of Mueller '189, EP '878 and Josephy et al '283. The Examiner has asserted that Mueller '189 discloses a multilayer thermoplastic film comprising a thermoplastic core layer having a first side and a second side, the core layer comprising: (a) 10-80% linear low density polyethylene having a density of from 0.910 to 0.925 g/cc, or 10-80% linear medium density polyethylene having a density of from 0.926 to 0.940; (b) 10-80% ionomer resin such as Surlyn 1601; and (c) 10-80% ethylene vinyl acetate; first and second thermoplastic skin layers comprising ethylene propylene copolymers blended with linear low density polyethylene or linear medium density polyethylene overlying the first side and second side of the core layer whereby the

composition of the core layer is different from the composition of the skin layers, and the core layer and the skin layers are characterized by the absence of PVC. The multilayer film is a coextrudate (unoriented) which is then oriented.

As to claims 85, 91, 95, 101, 104 and 108, the Examiner asserts that Mueller discloses a 5-layer thermoplastic film comprising a core layer 2 (column 6, lines 11-16); intermediate layers 5 and 7 comprising LLDPE or LMDPE and an ionomer (column 6, lines 24-35) and skin layers 4 and 8 comprising formulations of the skin layers 1 and 3. The Examiner further asserts that the topcoat layers 4 and 8 are clear since they are made from inherently clear formulations.

The Examiner has acknowledged on page 5 of the Communication mailed on July 11, 2003, that Mueller fails to teach

(1) The core layer comprises a light stabilizer at a concentration of about 1,000 to 10,000 ppm based on the weight of the core layer (independent claims 81, 93 and 103, and the claims dependent therefrom); and

(2) The first skin layer comprises a light stabilizer at a concentration of about 2,000 to about 20,000 ppm based on the weight of the skin layer, and the second skin layer comprises a light stabilizer at a concentration of 1,000 to 15,000 ppm based on the weight of the second skin layer (independent claim 103 and claims dependent therefrom);

To overcome these deficiencies, the Examiner relies on EP 569,878. The Examiner has asserted that EP 569,878 teaches a multilayer thermoplastic laminate consisting of a core layer containing not more than 0.5 weight percent of a UV absorber (stabilizer) with outer layer(s) containing at least 1% UV absorber on at least one side. The laminates described in EP '878 are useful for glazing and construction applications especially externally where the outer layer is exposed to sunlight. Accordingly, the Examiner concludes it would have been obvious to one or ordinary skill in the art at the time the invention was made to have included ultraviolet stabilizers into the core layer (e.g., in an amount of not more than 0.5 weight percent) and skin layers (e.g., in an amount of at least 1%) in a thermoplastic film of Mueller for use in applications where the outer layer is exposed to sunlight with the expectation of providing the desired protection against ultraviolet light, since EP '878 teaches that a multilayer thermoplastic laminate containing

a UV stabilizer in each layer can be used for glazing and construction applications, especially externally where the outer layer is exposed to sunlight.

The Examiner also has acknowledged on page 5 of the Communication mailed July 11, 2003 that the combination of Mueller/EP '878 fails to teach

(3) A layer of pressure sensitive adhesive overlying the second thermoplastic skin layer (all claims under appeal), and

(4) A release liner overlying the layer of pressure sensitive adhesive (claims 97, 116 and 118).

To overcome these deficiencies the Examiner relies on Josephy et al and asserts that Josephy et al teach that a multilayer thermoplastic film may be combined with a pressure sensitive adhesive and a release liner overlying the layer of pressure sensitive adhesive for making a multilayer film labelstock (see Fig. 2; column 5, lines 15-19 and column 6, lines 19-27). Inorganic fillers such as titanium dioxide may be used to provide opaque film labelstock (column 6, lines 49-51). Josephy et al also suggests that polyolefin blend films are resistant to abrasion when extruded, but such resistance is degraded when the film is uniaxially oriented following extrusion, and extruded non-stretched films achieve high abrasion resistant ratings although their MD stiffness is too low for proper dispensing (column 10, lines 43-59).

Moreover, according to the Examiner, it would have been obvious to have combined an extruded multilayer thermoplastic film obtained by the combination of Mueller and EP '878, either oriented or unoriented, if high abrasion resistance is required, with a pressure sensitive adhesive and a release liner overlying the layer of pressure sensitive adhesive for making multilayer film facestock as taught by Josephy et al.

Appellants respectfully submit that the above rejection should be reversed because there if no teaching or suggestion in either of the two secondary references relied upon by the Examiner which would motivate one skilled in the art to modify Mueller '532 in the manners suggested by the Examiner.

The above rejected claims are directed to a multilayer thermoplastic film which comprises a core layer; at least one abrasion resistant first thermoplastic skin layer overlying the first side of the core layer; at least one second thermoplastic skin layer

overlying the second side of the core layer; and at least one layer of a pressure sensitive adhesive overlying the second thermoplastic skin layer. All of the rejected claims require the presence of a light stabilizer in the core layer, and claims 103, 104, 107 and 108 further require the presence of a light stabilizer in both of the skin layers. In claims 103, 104, 107, 108 and 113, the multilayer film is defined as being "unoriented".

The rejection should be reversed because the Examiner has acknowledged that Mueller fails to teach (1) the core layer may comprise a light stabilizer at a concentration of about 1,000 to about 10,000 ppm based on the weight of the core layer; (2) the first skin layer comprises a light stabilizer at a concentration of 2,000 to about 20,000 ppm based on the weight of the first skin layer; and (3) the second skin layer comprises a light stabilizer at a concentration of about 1,000 to about 15,000 ppm based on the weight of the second skin layer; and (4) a pressure sensitive adhesive layer overlying a skin layer (Communication of July 11, 2003, page 5). Moreover, with respect to claims 87 and 97, the Examiner has acknowledged that Mueller and EP '878 does not teach or suggest the presence of a release liner overlying a layer of pressure sensitive adhesive. (Communication of July 11, 2003, page 5).

EP 569,878 is relied upon by the Examiner for its teaching that a multilayer thermoplastic laminate consisting of a core layer containing not more than 0.5 weight percent UV absorber (stabilizer), with outer layers containing at least 1% UV absorber on at least one side can be used for glazing and construction applications, especially where the outer layer is exposed to sunlight. Based upon these teachings in EP '878 the Examiner has concluded that it would be been obvious to have included ultraviolet light stabilizes into the core layer and into the skin layers of Mueller.

Even if, for sake of argument, it would have been obvious to include light stabilizers in the core layer and the skin layers of Mueller's multilayer films based upon the teachings of EP '878, there is no teaching or suggestion to add a layer of pressure sensitive adhesive over one of the skin layers in either of the cited references. To overcome this deficiency, the Examiner relies upon Josephy et al U.S. Patent 5,451,283 which relates to a multilayer thermoplastic film which may be combined with a pressure sensitive adhesive and a release liner.

The Examiner has suggested that since Mueller teaches "the multilayer film may be combined with other polymeric materials for specific applications" (column 4, lines 35-40), it would be obvious to add a pressure sensitive adhesive layer to the films of Mueller in view of Josephy et al.

Appellants respectfully submit that the rejection should be reversed. Mueller's general teaching that his thermoplastic film "may be combined with other polymeric materials for specific applications" is so broad and general that it fails to provide a basis for the specific modification suggested by the Examiner. There is no teaching or suggestion in Mueller to include a layer of a pressure sensitive adhesive in his multilayer films, and there is no teaching in Mueller that would suggest the desirability of such a modification. The Federal Circuit has repeatedly warned that the requisite motivation to modify a reference must come from the prior art, not from what is taught by an Applicant for a patent. Mueller contains no suggestion of using a pressure sensitive adhesive layer, and as noted in In re Gordon, 733 F2d, 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984), the mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art would suggest the desirability of the modification.

The only description of "other polymeric materials for specific applications" suggested by Mueller is that relatively thin layers may be added on either or both sides of the basic preferred three layer structure to improve seal strength or to lower gas and moisture permeability. No examples of polymeric compositions are given. Mueller's general teaching would include hundreds or even thousands of possible polymeric materials for various unspecified applications, and there is no teaching in Mueller that would lead one skilled in the art, or the Examiner, to a reference such as Josephy et al unless a person skilled in the art, or the Examiner first read Appellants' patent application.

In addition, the Examiner's attempt to extend the meaning of the phrase "may be combined with other polymeric materials for specific applications" found in Mueller to include a layer of a pressure sensitive adhesive and to include any application such as label or sign is unwarranted and unsupported. In fact, Mueller et al issue their own caution in column 7, lines 12-18:

> Additional layers and/or minor amounts of additives of the types described above may be added to either the three-layer or five-layer structure of the present invention as desired but care must be taken not to adversely alter the desirable shrink tensions, shrink properties, optics and other characteristics of the multilayer film of the present invention. (Emphasis added).

In view of these cautions listed by Mueller, it is respectfully submitted that Mueller's "specific applications" relate to applications as shrinkable films only, and it would not be obvious to one skilled in the art to add a pressure sensitive adhesive layer to the multilayer films described by Mueller for the purpose of preparing films for signs and labels. The addition of a layer of pressure sensitive adhesive to the shrink films described by Mueller would, contrary to his admonition, "adversely alter the desirable shrink tensions, shrink properties, optics and other characteristics of the multi-layer film of the present invention".

Moreover, Appellants submit that it would not be obvious to combine the teachings of Mueller and Josephy since the two patents are directed to different technology. Mueller is concerned with polyethylene shrink films (see title and column 1, lines 7-10) for use in packaging films (column 1, line 9). Josephy '283 is concerned with oriented and annealed films which are not shrink films and are useful in label manufacture. Accordingly, Appellants respectfully submit that claims 81-85, 87, 91-95, 97, 101-104, 107, 108 and 113 are patentable over the combination of Mueller '189, EP '878 and Josephy '189.

Furthermore, as noted above, claims 103, 104, 107, 108 and 113 define the film as being "unoriented". (Part of the Group 3 claims). This feature is an additional distinction over Mueller (and Josephy et al) which further renders these claims unobvious and therefore patentable over the references cited by the Examiner. As noted previously, Mueller et al relates to shrinkable films, and in order to obtain shrinkable films, Mueller's films are stretched to biaxially orient the films. (See, for example column 7, lines 23-24, column 8, lines 21-23 and 29-35; and Examples I-III in columns 8-10). The films prepared in Examples I-III are indicated in Table I (column 11) as having a free shrink in the machine direction and the cross direction.

There is no teaching or suggestion in Mueller that would motivate one skilled in the art to substitute an unoriented film for the oriented heat shrinkable film described by

Mueller. In the Communication of July 11, 2003 (page 3) the Examiner states, with regard to Mueller, "the multilayer film is coextrudate **(unoriented)**, which is then oriented (see column 7, lines 23-24)." (Emphasis in original). Although it is known that a coextrudate initially is "unoriented", Mueller's unoriented coextrudate is not prepared as a final product but as an intermediate which is not isolated or analyzed. The only utility suggested for the coextrudate by Mueller is in the preparation of a oriented and shrinkable film. Thus, when Mueller states that "the multi-layer film may be combined with other polymeric materials for specific applications," Mueller is referring to the multilayer shrinkable film not the coextrudate. Accordingly, for this reason and the reasons described above, it would not be obvious to one of ordinary skill in the art to isolate the unoriented coextrudate intermediate of Mueller and add a layer of pressure sensitive adhesive and, optionally, a release liner. Accordingly, claims 103, 104, 107 and 108 (and other claims directed to unoriented films as described below) are further distinguishable over the references cited by the Examiner, and the rejection of these claims should be reversed.

In the Advisory Action mailed from the Patent Office on November 24, 2003, in response to the reply under Rule 1.116 filed by Appellants on October 24, 2003, the Examiner noted that Appellants' attorney had argued that whereas Mueller's films are shrinkable films, the films described by Josephy are "not shrinkable". For the purposes of that argument, Appellants' attorney meant to say and should have said "are not shrink films" as presently stated above.

In the Advisory Action, the Examiner has stated that "one of ordinary skill in the art would know that oriented and annealed films are still shrinkable as evidenced by Rackovan U.S. Patent 5,435,963, (see column 26, lines 10-15 which is part of claim 48). Although an in-mold label as described in Rackovan's claim 48 which is hot stretched and annealed may have some residual heat shrinkability, such label film is not a "shrink film", as the term is used in the art.

Moreover, the phrase identified by the Examiner in column 26 of Rackovan must be taken in the context of the written description of the '963 patent. The phrase found in column 26 is repeated in column 9, lines 58-64 where the patentees have stated

> The result is that the construction is well balanced with respect to heat-shrinkability at both sides of the construction. Such balancing of the heat-shrinkability is an important concept of the invention.

Balanced constructions in multilayer films are known to those skilled in the art to provide multilayer films which are characterized as having little or no heat-shrinkability except for the inate heat-shrinkability of the material itself. Thus, Appellants submit that the phrase cited by the Examiner in column 26 and also found in column 9 is not a teaching that "oriented and annealed films" are still heat shrinkable to the extent that the films constitute "shrink films" as alledged by the Examiner. In fact, upon reviewing the entire written description of the Rackovan '963 patent, it is clear that Rackovan teaches that annealing at an elevated temperature is conducted to prevent or avoid shrinking. For example, in column 4, lines 58-66, Rackovan states

> The in-mold label film material should be annealed at a temperature sufficiently above the expected surface temperature to avoid shrinking, relaxation or any distortion of the film which may interfere with the in-mold labeling process. The annealing temperature of the film material is therefore equal to or higher than the temperature at which the heat-activated adhesive is eventually to be activated by contact with the workpieces. (Emphasis added).

In addition, in column 5, lines 66 through column 6, line 8, Rackovan states

> In the particular example described, the stock now continues on its way at a rate of 75 feet per minute. As it leaves the pull-roll pair 31, 32, the stretched stock is subject to severe shrinkage if it is heated while under little or no mechanical constraint. The plastic stock is said to have a "memory" of its original length to which it tends to return when heated. The stock is cured or annealed to remove this tendency by applying heat to the tensioned stock at the annealing roll 36 which in the particular example described is maintained at 240°F. (Emphasis added).

In column 11, lines 59-62 Rackovan states

> As indicated above, the annealing temperature of the in-mold label film should exceed the surface temperature in the mold in order to avoid label shrinkage or distortion. (Emphasis added).

Thus, the Examiner's suggestion that Rackovan teaches that an oriented and annealed film is a shrink film is without foundation.

Additionally, the Examiner had suggested in the Advisory Action (page 2) that

> One of ordinary skill in the art would know that shrinkable films that are useful in packaging, and shrinkable labels are directed to the same technology. (Emphasis in original).

The Examiner cites Fujio U.S. 5,421,932 (column 1, lines 21-24); Hostetter U.S. 5,460,878, (column 2, lines 44-45); JP 05208447 (see title); and JP 05305667 (see abstract).

Based upon the above cited documents, it would appear that the Examiner is correct in the statement that "shrinkable films" useful in packaging, and "shrinkable labels" are directed to the same technology. However, the "shrinkable labels" discussed in the cited references are based upon "shrinkable films". Thus, although it might be obvious to combine the teachings of the primary Mueller reference with the four shrinkable film references cited by the Examiner since the secondary references relate to shrinkable films, it would not be obvious to combine the shrinkable film teaching of Mueller with the uniaxially oriented films described by Josephy et al since Josephy et al anneal the films after the films are hot stretched. Thus, Josephy's films are not "shrink films".

(B) Claims 88, 89, 98, 99, 109 and 110 are not obvious, under 35 USC §103(a), over Mueller '189 in view of EP '898 and Joseph et al '283 and further in view of Schreck et al U.S. 5,716,698.

Claims 88, 89, 98, 99, 109 and 110 are dependent claims which specify that an additional opacifying layer is present between the core layer and the second skin layer. Claims 109 and 110 further specify that the multilayer films are unoriented.

Josephy is applied for the same reasons as given above and further for the teaching that labels can be made either clear or opaque depending on the intended use of the final product. Inorganic fillers such as calcium carbonate and titanium dioxide and blends thereof can be used to provide opaque film labelstock (column 6, lines 49-51). The Examiner has noted that a preferred skin layer is an EVA-olefin blend for both contact-clear and opaque label film applications (column 7, lines 9-16).

Accordingly, the Examiner has concluded that it would have been obvious to one of ordinary skill in the art at the time of the invention to have made the film of Mueller in view of EP 569,878 either opaque by adding inorganic fillers such as calcium carbonate to an EVA-olefin blend core layer or clear depending on intended use of a final product as taught by Josephy et al. (Communication of August 27, 2003, page 3). However, the Examiner does acknowledge that Mueller in view of EP and Josephy fail to teach that the film may be rendered opaque by adding an opacifying layer between the core layer and the second skin layer. To overcome this additional deficiency, Schreck et al is relied upon for its teaching that thermoplastic polyolefin films can be made opaque (column 1, lines 6-13); (column 2, line 48) by adding conventional opacifying pigments such as white pigments to at least one of layers of the film (column 3, lines 44-49, 64; column 4, lines 1-4). The Examiner further notes that the secondary reference of Schreck et al is relied upon to show that pigments can be added to any layer in thermoplastic polyolefin films to render the films opaque. Thus, the Examiner concludes it would be obvious to have added white pigments to at least one of the layers in the film of Mueller in view of EP '878 and Josephy et al as taught by Schreck et al.

Appellants respectfully submit that the rejection of these claims also should be reversed since, although it is known to use pigments to render films or layers of multilayer films opaque, there is no teaching or suggestion in the four references relied upon by the Examiner to introduce an opacifying layer between the core layer and the second skin layer as specified in the present claims. Moreover, with respect to claims 104 and 108 which define the multilayer film as being "unoriented", the rejection should be reversed because there is no teaching or suggestion in Mueller (or Josephy) of a multilayer unoriented film containing an adhesive layer.

(C) Claims 115-118 are not obvious, under 35 USC §103(a), over Mueller '189 in view of Josephy '283.

Claims 115 and 116 define an unoriented multilayer thermoplastic film comprising a core layer having a first side and a second side; at least one abrasion resistant first thermoplastic skin layer overlying the first side of the core layer; at least one second thermoplastic skin layer overlying the second side of the core layer; and at least one layer of pressure sensitive adhesive overlying the second thermoplastic skin layer. The core layer comprises (a) a polyolefin having a density in the range of about 0.89 to about 0.97 g/cc; and (b) from about 2% to about 25% of a second polymeric material selected from ionomers derived from sodium, lithium or zinc and an ethylene/unsaturated carboxylic acid copolymer. Claims 117 and 118 are similar to claim 115 except that the core also comprises from about 0.1% to about 40% by weight of a third polymeric material selected from ethylene/vinyl acetate copolymers, acid modified ethylene/vinyl acetate copolymers, anhydride modified ethylene/vinyl acetate copolymers, acrylate modified ethylene/vinyl acetate copolymers, anhydride modified polyolefins, acid modified ethylene acrylate polymers and anhydride modified ethylene acrylate polymers. Unlike the remaining claims under appeal, the multilayer thermoplastic films of claims 115-118 do not specify the presence of a light stabilizer in the core layer.

The Examiner has suggested that Mueller teaches that the heat-shrinkable thermoplastic film may be combined with other polymeric materials for specific applications (column 4, lines 35-40), but the Examiner acknowledges that Mueller et al fail to teach that for some applications a layer of pressure sensitive adhesive overlies the second thermoplastic skin layer and a release liner overlies the skin layer. The Examiner applies Josephy et al for the same reasons as given above, and the Examiner concludes that it would have been obvious to have combine an extruded multilayer thermoplastic film of Mueller, either oriented or unoriented, if high abrasion resistance is required, with a pressure sensitive adhesive and a release liner overlying the layer of pressure sensitive adhesive for making a multilayer film labelstock as taught by Josephy et al.

Appellants request that the rejection of claims 115-118 be reversed since these claims relate to unoriented films containing a layer of pressure sensitive adhesive, and

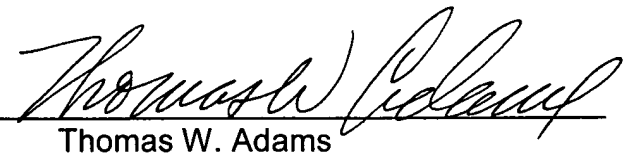
such claims would not be obvious over the combination of Mueller and Josephy. As noted by the Examiner, Mueller teaches that the heat-shrinkable thermoplastic film may be combined with other polymeric materials for specific applications. In order to be heat-shrinkable, the film must be oriented. Although Mueller mentions a coextrudate (unoriented) as an intermediate, there is no teaching or suggestion by Mueller that such an intermediate could be combined with any other polymeric materials for specific applications. Although Appellants submit that it would not be obvious to combine the teachings of Mueller and Josephy for the reasons given above. However, even if, for the sake of argument, it would be considered obvious to combine the teachings of Mueller and Josephy, one skilled in the art would add a layer of pressure sensitive adhesive to Mueller's oriented heat-shrinkable film, not the intermediate coextrudate which is unoriented. Accordingly, the rejection of claims 115-118 should be reversed.

IX. CONCLUSION.

For the foregoing reasons, Appellants respectfully submit that the rejected claims are not obvious over the references relied upon by the Examiner. All of the claims pending in the application are patentable over the references relied upon by the Examiner, and the rejection of all of the claims should be reversed.

Respectfully submitted,

RENNER, OTTO, BOISSELLE & SKLAR, LLP

By 

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APPENDIX: CLAIMS ON APPEAL

81. A multilayered thermoplastic film, comprising:

a thermoplastic core layer having a first side and a second side, the core layer comprising:

(a) a polyolefin having a density in the range of about 0.89 to about 0.97 grams per cubic centimeter;

(b) from about 2% to about 25% by weight of a second polymeric material selected from ionomers derived from sodium, lithium or zinc and an ethylene/unsaturated carboxylic acid copolymer; and

(c) a light stabilizer at a concentration of about 1000 to about 10,000 ppm based on the weight of the core layer;

at least one abrasion resistant first thermoplastic skin layer overlying the first side of the core layer;

at least one second thermoplastic skin layer overlying the second side of the core layer, and

at least one layer of a pressure sensitive adhesive overlying the second thermoplastic skin layer,

wherein the composition of the core layer is different from the composition of the skin layers, and the core layer and the skin layers are characterized by the absence of PVC.

82. The film of claim 81, wherein the core comprises from about 2% to about 10% by weight of the second polymeric material.

83. The film of claim 81, wherein the core layer further comprises:

(c) from about 1% to about 45% by weight of a third polymeric material selected from ethylene/vinyl acetate copolymers, acid modified ethylene/vinyl acetate copolymers, anhydride modified ethylene/vinyl acetate copolymers, acrylate modified ethylene/vinyl acetate copolymers, anhydride modified polyolefins, acid modified ethylene acrylate polymers and anhydride modified ethylene acrylate polymers.

84. The film of claim 83, wherein the core comprises from about 20% to about 40% by weight of the third polymeric material.

85. The film of claim 81, further comprising a clear topcoat layer which overlies the first thermoplastic skin layer, wherein the clear topcoat layer is characterized by the absence of PVC.

87. The film of claim 81, wherein a release liner overlies the layer of pressure sensitive adhesive.

88. The film of claim 81, further comprising an opacifying layer between the core layer and the second skin layer.

89. The film of claim 88, wherein the opacifying layer comprises a white pigment, a black pigment or a mixture thereof.

91. The film of claim 81, wherein the first skin layer is comprised of an ionomer derived from sodium, lithium or zinc and an ethylene/unsaturated carboxylic acid copolymer.

92. The film of claim 83, wherein the third polymeric material is an ethylene/vinyl acetate copolymer.

93. A multilayered thermoplastic film, comprising:

a thermoplastic core layer having a first side and a second side, the core layer comprising:

(a) a polyolefin having a density in the range of about 0.89 to about 0.97 grams per cubic centimeter;

(b) from about 2% to about 10% by weight of a second polymeric material selected from ionomers derived from sodium, lithium or zinc and an ethylene/unsaturated carboxylic acid copolymer,

(c) from about 1% to about 40% by weight of a third polymeric material selected from ethylene/vinyl acetate copolymers, acid modified ethylene/vinyl acetate copolymers, anhydride modified ethylene/vinyl acetate copolymers, acrylate modified ethylene/vinyl acetate copolymers, anhydride modified polyolefins, acid modified ethylene acrylate polymers and anhydride modified ethylene acrylate polymers; and

(d) a light stabilizer at a concentration of about 1000 to about 10,000 ppm based on the weight of the core layer;

at least one abrasion resistant first thermoplastic skin layer overlying the first side of the core layer;

at least one second thermoplastic skin layer overlying the second side of the core layer, and

at least one layer of pressure sensitive adhesive overlying the second thermoplastic skin layer,

wherein the composition of the core layer is different from the composition of the skin layers, and the core layer and the skin layers are characterized by the absence of PVC.

94. The film of claim 93, wherein the core comprises from about 20% to about 40% by weight of the third polymeric material.

95. The film of claim 93, further comprising a clear topcoat layer which overlies the first thermoplastic skin layer, wherein the clear topcoat layer is characterized by the absence of PVC.

97. The film of claim 93, wherein a release liner overlies the layer of pressure sensitive adhesive.

98. The film of claim 93, further comprising an opacifying layer between the core layer and the second skin layer.

99. The film of claim 98, wherein the opacifying layer comprises a white pigment, a black pigment or a mixture thereof.

101. The film of claim 93, wherein the first skin layer is comprised of an ionomer derived from sodium, lithium or zinc and an ethylene/unsaturated carboxylic acid copolymer.

102. The film of claim 93, wherein the third polymeric material is an ethylene/vinyl acetate copolymer.

103. An unoriented multilayered thermoplastic film, comprising:

a thermoplastic core layer having a first side and a second side, the core layer comprising:

(a) a polyolefin having a density in the range of about 0.89 to about 0.97 grams per cubic centimeter;

(b) from about 3% to about 10% by weight of a second polymeric material selected from ionomers derived from sodium, lithium or zinc and an ethylene/methacrylic acid copolymer,

(c) from about 1% to about 40% by weight of a third polymeric material selected from ionomers derived from sodium, lithium or zinc and an ethylene/unsaturated carboxylic acid copolymer,

(d) a light stabilizer at a concentration of about 1,000 to about 10,000 ppm based on the weight of the of core layer;

an abrasion and scuff resistant clear first thermoplastic skin layer overlying the first side of the core layer, the first skin layer comprising a light stabilizer at a concentration of about 2,000 to about 20,000 ppm based on the weight of the first skin layer;

a clear second thermoplastic skin layer overlying the second side of the core layer; the second skin layer comprising a light stabilizer at a concentration of about 1,000 to about 15,000 ppm based on the weight of the second skin layer; and

at least one layer of pressure sensitive adhesive overlying the second thermoplastic skin layer;

wherein the composition of the core layer is different from the composition of the skin layers, and the core layer and the skin layers are characterized by the absence of PVC.

104. The film of claim 103, wherein a clear topcoat layer overlies the first thermoplastic skin layer, the clear topcoat layer being characterized by the absence of PVC.

107. The film of claim 103, wherein the core layer and the skin layers comprise a coextrudate.

108. The film of claim 103, wherein the first skin layer is comprised of an ionomer derived from sodium, lithium or zinc and an ethylene/methacrylic acid copolymer.

109. The film of claim 103, further comprising an opacifying layer between the core layer and the second skin layer.

110. The film of claim 109, wherein the opacifying layer comprises a white pigment, a black pigment or a mixture thereof.

113. The multilayer film of claim 81 wherein the multilayer film is unoriented.

115. An unoriented multilayered thermoplastic film, comprising:

a thermoplastic core layer having a first side and a second side, the core layer comprising:

(a) a polyolefin having a density in the range of about 0.89 to about 0.97 grams per cubic centimeter; and

(b) from about 2% to about 25% by weight of a second polymeric material selected from ionomers derived from sodium, lithium or zinc and an ethylene/unsaturated carboxylic acid copolymer;

at least one abrasion resistant first thermoplastic skin layer overlying the first side of the core layer;

at least one second thermoplastic skin layer overlying the second side of the core layer; and

at least one layer of a pressure sensitive adhesive overlying the second thermoplastic skin layer,

wherein the composition of the core layer is different from the composition of the skin layers, and the core layer and the skin layers are characterized by the absence of PVC.

116. The film of claim 115, wherein a release liner overlies the layer of pressure sensitive adhesive.

117. An unoriented multilayered thermoplastic film, comprising:

a thermoplastic core layer having a first side and a second side, the core layer comprising:

(a) a polyolefin having a density in the range of about 0.89 to about 0.97 grams per cubic centimeter;

(b) from about 2% to about 10% by weight of a second polymeric material selected from ionomers derived from sodium, lithium or zinc and an ethylene/unsaturated carboxylic acid copolymer, and

(c) from about 1% to about 40% by weight of a third polymeric material selected from ethylene/vinyl acetate copolymers, acid modified ethylene/vinyl acetate copolymers, anhydride modified ethylene/vinyl acetate copolymers, acrylate

modified ethylene/vinyl acetate copolymers, anhydride modified polyolefins, acid modified ethylene acrylate polymers and anhydride modified ethylene acrylate polymers;

at least one abrasion resistant first thermoplastic skin layer overlying the first side of the core layer;

at least one second thermoplastic skin layer overlying the second side of the core layer; and

at least one layer of pressure sensitive adhesive overlying the second skin layer;

wherein the composition of the core layer is different from the composition of the skin layers, and the core layer and the skin layers are characterized by the absence of PVC.

118. The film of claim 117, wherein a release liner overlies the layer of pressure sensitive adhesive.